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When you find out that something has been done wrong, you're supposed to fix it, whether that requires a simple tweak or starting from scratch. The magnitude of the falsification at Parcel G, estimated by EPA to be 97% of survey units, requires the entire site be thoroughly retested to ensure it is truly safe for the proposed use (which currently would allow residential development throughout almost all of it). In light of this, the Navy's Proposed Retesting Plan for Parcel G is a sham. What should be a plan to help reassure and protect the community of Bayview and Hunters Point is being used instead as a way for the Navy to disregard proper practice and lie about the current status of the Shipyard.

1. The Navy seems to completely disregard the need for retesting.

The Parcel G retesting plan should be a way of reassuring the residents of Hunters Point and Bayview that their community is truly clean, or will be clean by the time of its transfer back to the city. The EPA's reports released under FOIA showed that nearly all of the samples taken at Parcel G were subject to falsification, and recommended a retesting of essentially all of the survey units at the site to discover the true extent of contamination. They recommended 59 of the 63 trench units and all 107 fill units be retested. What the Navy has offered instead is a plan to retest only 21 of the trench units and none of the fill units (relegating other trench units to a second phase that would involve a cursory review). They also **falsely and astonishingly** claim the samples taken at Parcel G were *actually biased high* and therefore the site is vastly cleaner than believed (this is due to a false claim about the amount of radium onsite, and will be explained in further detail later in this comment). This is in stark contrast with EPA's findings and raises major red flags.

It is clear that the Navy cares less about having a clean site, and more about limiting the amount of work, time, and money they will have to put into the site going forward. It is imperative that the site gets cleaned up to the fullest extent in order to guarantee the safety of future residents.

2. The Navy is using the retesting as a way to circumvent proper Superfund practice.

Provided the results of the investigation come up clean, the Navy intends to use the results of this investigation to form their Remedial Action Completion Report. However, the investigation proposes remediation at levels higher than those approved in the Record of Decision for Parcel G. The ROD calls for all radiologically impacted soils to be remediated according to Residential Remediation Goals, as described in table 5 below. However, table 3-5 of the retesting plan says all RGs will be applied as concentration above background. This is allowed in the ROD for no radionuclide except radium-226. The remediation goals **are already substantially higher than the values of the current EPA Preliminary Remediation Goals**, and adding "background" on top of this allows for even further dangerous levels of

contamination to remain on site. According to the original ROD, with the sole exception of radium, the Navy must meet the remediation goals, not the remediation goal plus background. See ROD remediation goals, below. To attempt to change these goals and practices in a document that is neither a Proposed Plan, Feasibility Study, or Record of Decision seems unethical and highly suspicious, as though the Navy intended to ignore Superfund guidelines and practices by creating their own guidelines in a document that would likely be missed on the public eye.

Table 5. Remediation Goals for Radionuclides

Radionuclide	Surfaces (dpm/100 cm ²)		Soil (pCi/g)		Water (pCi/L)
	Equipment Waste ^a	Structures ^b	Construction Worker	Resident ^d	
Cesium-137	5,000	5,000	0.113	0.113	119
Cobalt-60	5,000	5,000	0.0602	0.0361	100
Plutonium-239	100	100	14	2.59	15
Radium-226	100	100	1 ^c	1 ^c	5
Strontium-90	1,000	1,000	10.8	0.331	8
Thorium-232	1,000	36.5	19	1.69	15
Hydrogen-3	5,000	5,000	4.23	2.28	20,000
Uranium-235 + daughters	5,000	488	0.398	0.195	30

Notes:

a Limits for removable surface activity are 20 percent of these values.

b Remediation goals are consistent with those issued in the Radiological TCRA Action Memo. Remediation goals meet the 25 millirem per year residual dose level consistent with 10 CFR Section 20.1402. Furthermore, for most radionuclides of concern, goals meet the 15 millirem per year residual dose level consistent with the 1997 EPA OSWER Directive (OSWER No. 9200.4-18). Of exception is the goal for Thorium-232 goal which due to detection limit technical limitations, corresponds to a dose of 25 mrem/yr.

c Goal is 1 pCi/g above background per agreement with EPA.

d All radiologically impacted soils in this parcel will be remediated according to Residential Remediation Goals.

3. The Navy has claimed that samples reading hot for Radium-226 were biased high, when in fact this is not the case.

The Navy now astonishingly claims that the measurements and measurements techniques it approved for years for Radium-226 were in fact biased high and that it knew this for years and nonetheless allowed tens of millions of dollars to be spent cleaning up soil that didn't need to be cleaned up. It bases this extraordinary claim on the assertion that the onsite laboratory couldn't discriminate between the Radium-226 gamma peak and the nearby Uranium-235 peak, and therefore the Radium value may have been high. It says this based on the assertion that U-235 is not a radionuclide of concern and therefore should be ignored. However, there were large amounts of U-235 used at Hunters Point, from unfissioned U-235 in weapons fallout and ship contamination to licensed uses for NRD. Indeed, the ROD identifies U-235 as a radionuclide of concern (see table above). It matters little to public health whether the radioactivity in the soil sample is pure radium-226 or radium-226 plus uranium-235; they are dangerous alone or in combination. Furthermore, the remediation goal for U-235 is an order of

magnitude lower (i.e. more protective) than that for radium-226, so if part of the sample is uranium-235 rather than pure radium-226, that would make it more dangerous, not less. So to try to reduce the radium values by this spurious claim and declare 80% of past cleanup to have been unnecessary is a sign of the Navy behaving in precisely the fashion that got Tetra Tech into trouble.

Secondly, the Work Plan proposes to use Uranium-238 values as the Radium-226 background, if doing so can push the radium background up and reduce the the amount of cleanup. It is based on the assumption that Radium-226 and Uranium-238 are in secular equilibrium, which is not true if U-238 is another radionuclide of concern at the site, which it is. According to the Historical Radiological Assessment U-238 was in fact used at the site with a license allowing up to 2,426 lbs and therefore a potential ROC (Section 4 Tables 4-2 and 4-3 and Section 5 table 5-1). The argument by the Navy that there is no historical context for the use of U-238 at Parcel G in particular is weak. Historical interviews in the HRA demonstrate the lackadaisical attitude the workers had in regards to contamination migration throughout the site. It is highly probable that contamination from other parcels could have made it onto Parcel G, and given the plan for the site as a mixed use space, the safest cleanup standards should be employed, rather than relying on the chance of upward bias to avoid cleanup.

4. Background Reference Areas should not be located within, or close to the Shipyard Boundaries.

Four of the five background locations for soil proposed for the Parcel G retesting are astonishingly proposed from within the contaminated Hunters Point itself. (The one exception is proposed from an area less than two miles away.) This violates the fundamental rule of background measurements, that they be taken from places that cannot possibly have been affected by the contaminated site. According to Figure 3-1 in Appendix A, one of the four samples from onsite (RBA-1) is located in Parcel B, merely 500 feet away from the known-to- be radiologically contaminated IR sites 7 and 18. The other three onsite locations are in the midst of Hunters Point, near known contaminated areas. Furthermore, because of the decades of activities like sandblasting contaminated ships, contamination could have spread anywhere on site and in fact nearby as well. Using such potentially contaminated sites for background locations violates fundamental principles and suggests an effort to create false, inflated background values so as to inappropriately reduce cleanup obligations by not having to clean up soil that is in fact contaminated.



In regards to building sample locations, it is ludicrous that samples are being taken from a building that is identified as radiologically impacted. Building 401 is an impacted building, and yet somehow the Navy is proposing that this building can act as a reference area for itself, and other buildings at Parcel G. Samples should not even be taken from buildings within the site, much less from one of the very same buildings that is under question.

Conclusion

The Parcel G retesting Plan proposed by the Navy is wholly unacceptable, and is nothing more than their attempt at avoiding further responsibility and work. The retesting should have the purpose of determining whether there is contamination that needs to be cleaned up, so that it is safe for future residence. Instead, it is entirely clear that the Navy does not care if the site is contaminated or not, only that they can hand it off to the city with as little work or cost to them as possible. The plan needs to be redesigned to be truly thorough and protective, taking samples from acceptable locations and using reference levels and remediation goals that will protect the citizens of San Francisco and the rest of the Bay Area.

Sincerely,

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